

Improving the Quality of Scientific Journals: Insights from Nature

8th Asian Science Editors' Conference
15 July 2024

About me...

Researcher for 20 years



USA, Singapore, & Japan

Trainer for 12 years



Over 600 workshops in 35+ countries

The international journal of science / 19 November 2020

outlook
Lung cancer

nature

FACING FACTS

The power and pitfalls of
facial-recognition technology

Informing the public
Reveal sources, gaps
and bias for better
scientific engagement

Global movement
Model reveals
hierarchical nature
of human mobility

Microbiome
How human habits can
help unpick role of gut
microbes in disease

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nature masterclasses

Leveraging the expertise at **Nature**,
we support the research community
to achieve their goals




Improving the **quality** of scientific journals



A person stands on a wide staircase that leads up to a series of three nested, arched openings in a dark, tunnel-like structure. The person is silhouetted against the bright light coming from the farthest, largest arch. The light creates a strong contrast with the dark interior, highlighting the steps and the person's figure. The overall mood is one of journey, progress, and reaching a goal.

Steps in improving quality

1. Improving visibility
2. Filtering the best work of those submitted

A photograph of a person standing at the bottom of a long, arched staircase. The staircase is made of stone and leads up to a bright, glowing light at the top, which is framed by a series of arches. The person is silhouetted against the bright light. The overall scene is dark, with the light at the top providing the main source of illumination.

Steps in improving quality

1. Improving visibility
2. Filtering the best work of those submitted

Journal promotion & networking

Authors will not submit to your journal if
they don't know your journal

Personal

Online



Personal promotion

Editors and editorial board members
should be promoting the journal

Colleagues

Collaborators

Conferences

- Talking about the journal (reputation)
- Soliciting articles and reviews

Personal promotion

The importance of your **Editorial Board**

The more diverse your Editorial Board is internationally, the **broader** your promotion will be

Ensure your Editorial Board members are in regions with **high growth** and familiar with the **emerging trends** to maximize their impact



Network with potential authors

Networking with potential authors

An interesting case study...

Started in 1990, independently published

Indexed in SCI-E in 2001 (IF = 2.1)

Little improvement from 2001 to 2005

	2001	2002	2003	2004	2005
JIF	2.1	1.96	1.73	1.94	2.2



Cell Research

In 2006, published by Nature Publishing Group

Hired new editor from Cell Press, Dangsheng Li

Two major changes

- Hired full-time editorial staff (paid for by SIBS)
- Active promotion at conferences and institutions
 - Establish **confidence** and **trust** in the journal

Cell Research

Talk to researchers about their study and offer **valuable advice** for improvement

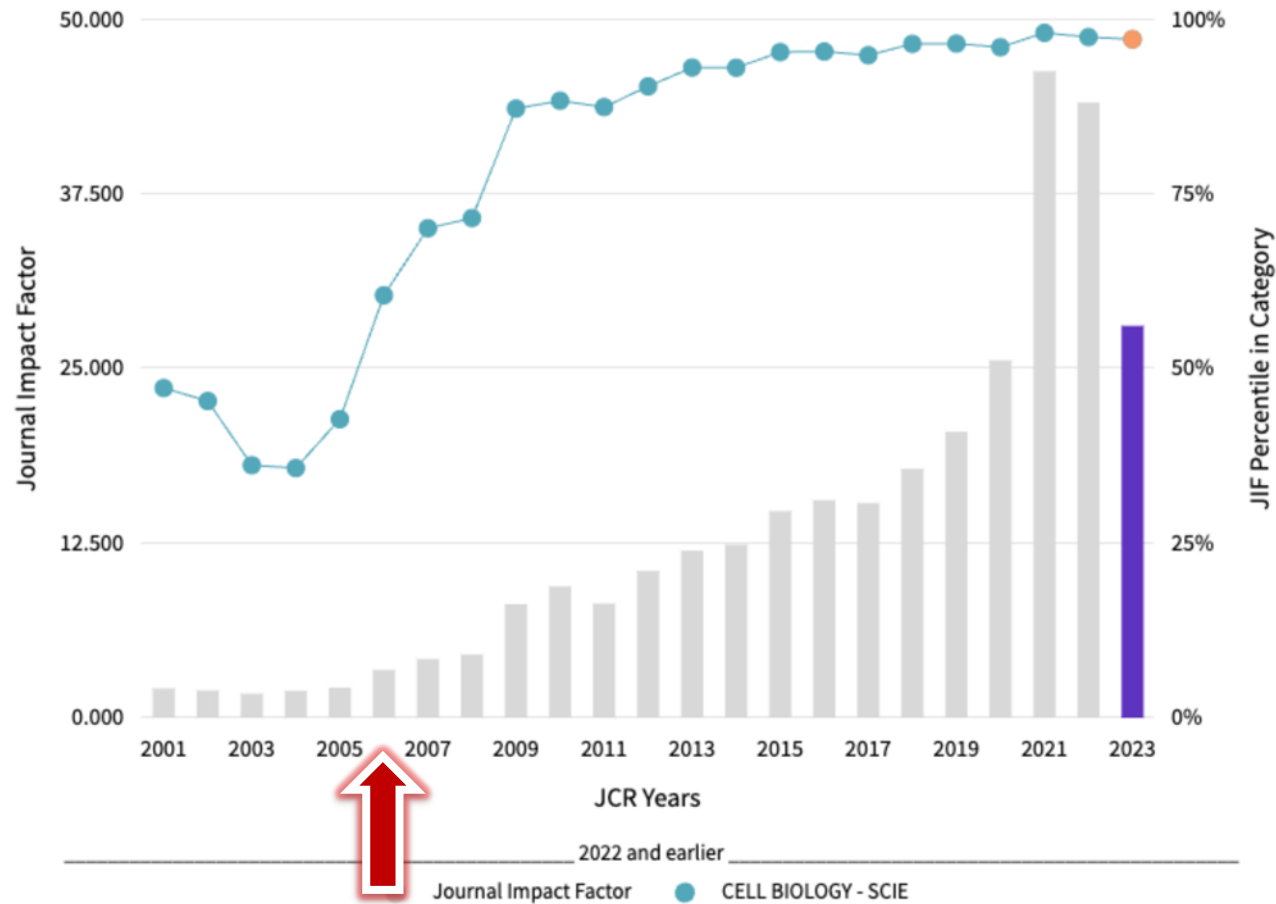
Receptive

Not receptive

Promote the journal

Not promote the journal

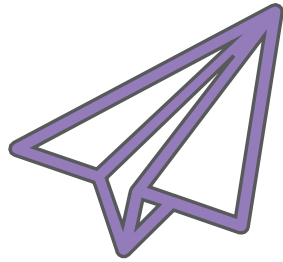
Cell Research



2023 JIF
= 28.1

Personal promotion

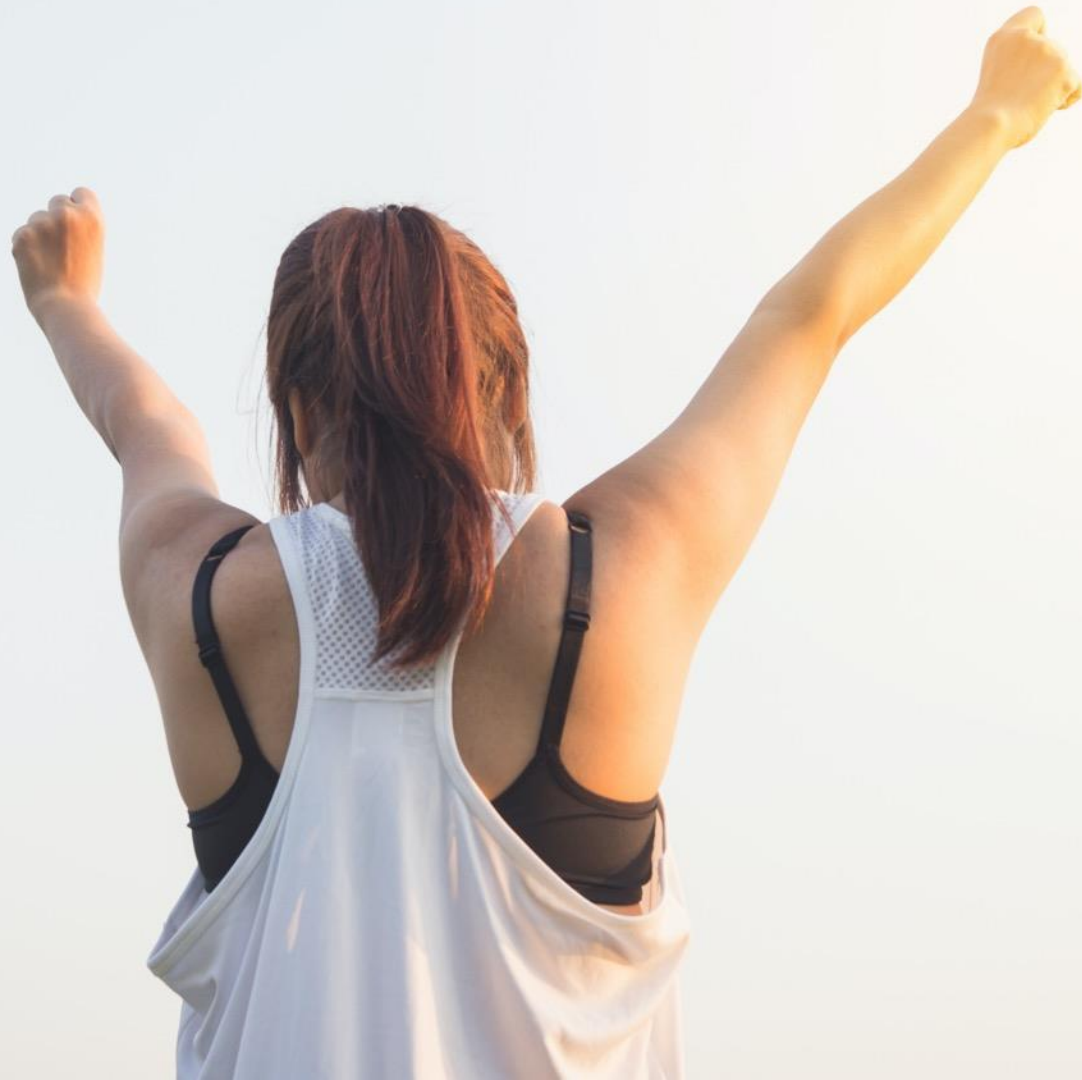
Invite reputable researchers are **reviewers**



Send invitations when you receive a nice submission that matches their interest

Even if they decline, you have had the opportunity to **promote** your journal!

Many opportunities for
personal promotion!



What about online promotion?

How many of you are already promoting your journal's articles online?



Promoting on social media

Does promoting articles online increase visibility?

Research Report

Effect of Promotion via Social Media on Access of Articles in an Academic Medical Journal: A Randomized Controlled Trial

R. Jay Widmer, MD, PhD, Jay Mandrekar, PhD, Angelina Ward, Lee A. Aase, William L. Lanier, MD, Farris K. Timimi, MD, and Thomas C. Gerber, MD, PhD

- Randomly chose 68 articles from Mayo Clinic Proceedings
- Promoted 34 on social media
- Tracked page views and downloads for 30 days

	Promoted*	Not promoted*
Page views	1070 (563–2361)	265 (148–570)
Downloads	1042 (497–2133)	142 (50–335)

*Median (IQR); $p < 0.001$



***So be sure to promote
those articles!***

Emerging trends


Review articles

Reputable authors

Network with reputable researchers online


Offer useful insights
on their posts to
establish credibility



A photograph of a person standing at the bottom of a long, arched staircase. The staircase is made of stone and leads up to a bright, glowing light at the top. The person is silhouetted against the light. The walls are made of brick and the overall atmosphere is one of hope and progress.

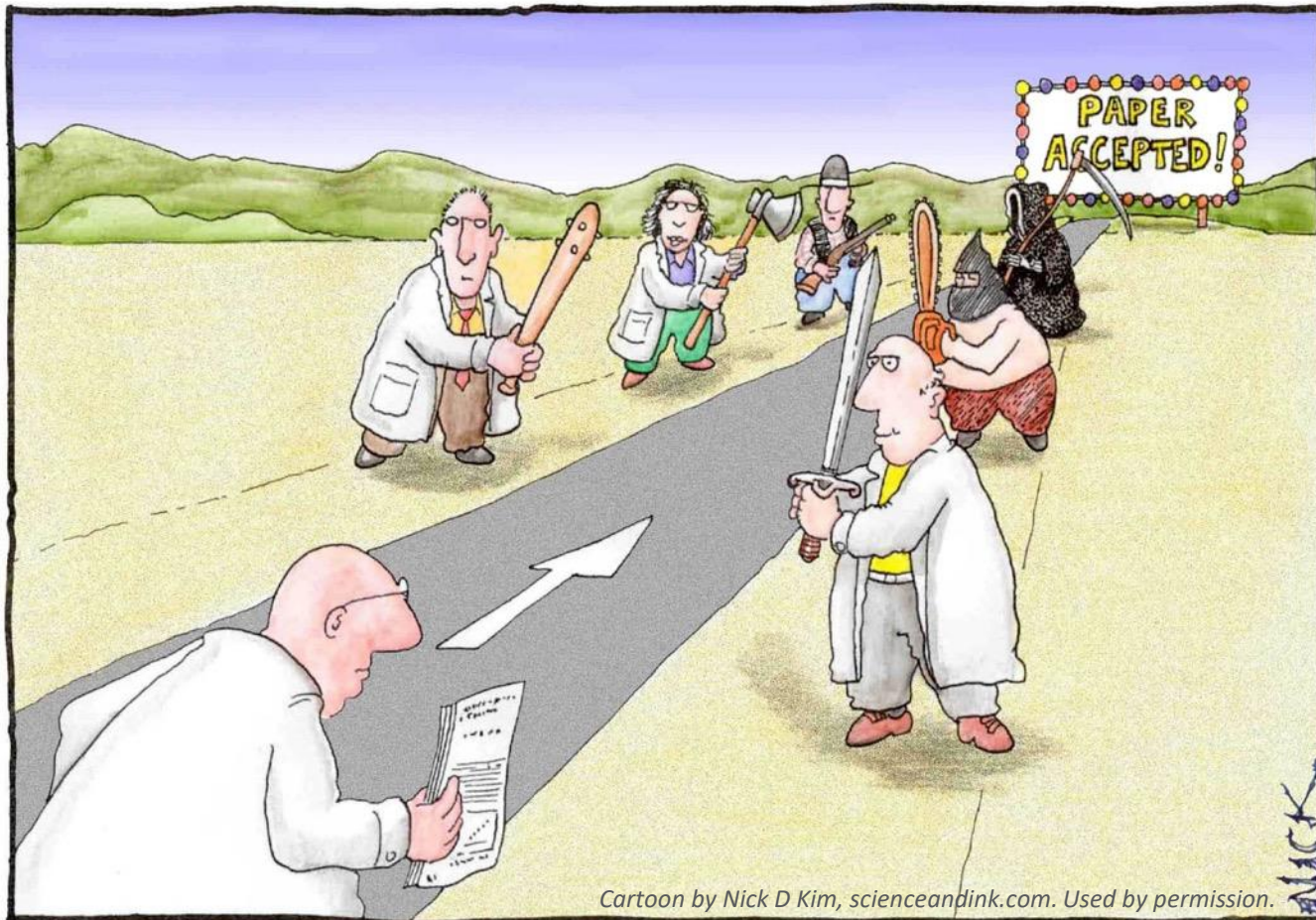
Steps in improving quality

1. Improving visibility
2. Filtering the best work of those submitted

A black and white photograph of a woman with glasses and a striped shirt, sitting at a desk and looking down at a stack of papers. She is pointing at a document with her right hand. The desk is cluttered with many stacks of papers, some of which are held together by binder rings. The background is slightly blurred, showing more stacks of papers.

Importance of peer review

Peer review



Most scientists regarded the new streamlined peer-review process as "quite an improvement."

Choosing reviewers

*One of our most
important responsibilities*



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*One of our most
important responsibilities*

- ✓ Subject and technical expertise



Choosing reviewers

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- ✓ Subject and technical expertise
- ✓ Fair and constructive



Choosing reviewers

*One of our most
important responsibilities*

- ✓ Subject and technical expertise
- ✓ Fair and constructive
- ✓ No conflicts of interest



Case study

communications materials

Editors

Our in-house editors are PhD-level scientists with research experience. All in-house editors work full-time for the journal to oversee the review process, handle manuscripts as primary editors, liaise with our [Editorial Board Members](#) and enforce journal policy. Editors also engage in other activities on behalf of the journal, such as attending and organizing conferences and meeting with scientists at their institutions.

In-house editors work closely with our Editorial Board Members to ensure that all manuscripts are subject to the same editorial standards and journal policies.

<https://www.nature.com/commsmat/editors>

Case study

communications materials

- Academic editor chose 3 reviewers who were **collaborators** (i.e., editor and reviewers have all published together)
- Resulted in 3 very **similar** reviews
- In-house editor stepped in and suggested a fourth unrelated reviewer to keep the peer review process **fair** and provide another **viewpoint**

Be willing to **overrule** a reviewer's comment if you feel it is unnecessary or biased



Choosing reviewers

*One of our most
important responsibilities*

- ✓ Subject and technical expertise
- ✓ Fair and constructive
- ✓ No conflicts of interest
- ✓ Pays attention to detail, but sees the big picture



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- ✓ Familiar with journal standards



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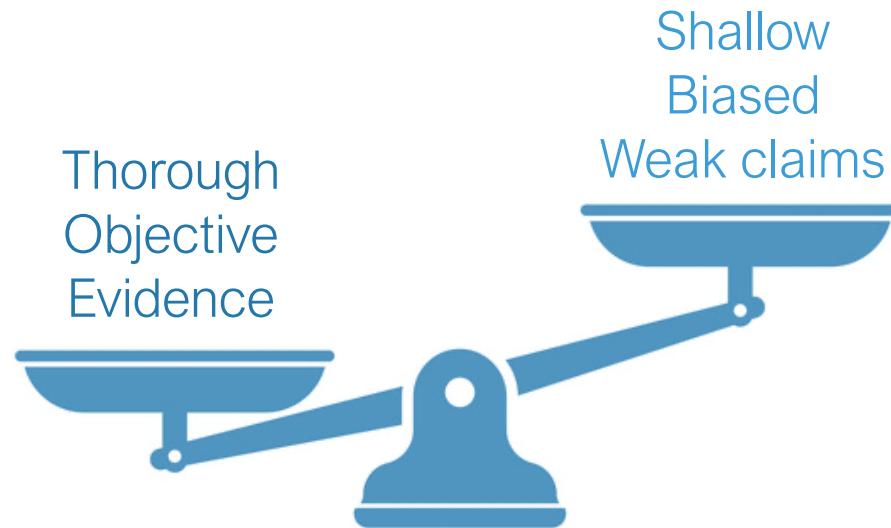


Editorial evaluation & decisions

How editorial decisions should be made

Don't count votes, but consider **arguments**

Strong arguments
should carry **more
weight** in editorial
decisions



Common criteria for acceptance

- Within journal's scope
- Novel / original
- Relevant for the field
- Trending topic(s)



Identifying trends



Be **predictive** on which papers will be useful and interesting for the field

Evaluating trends

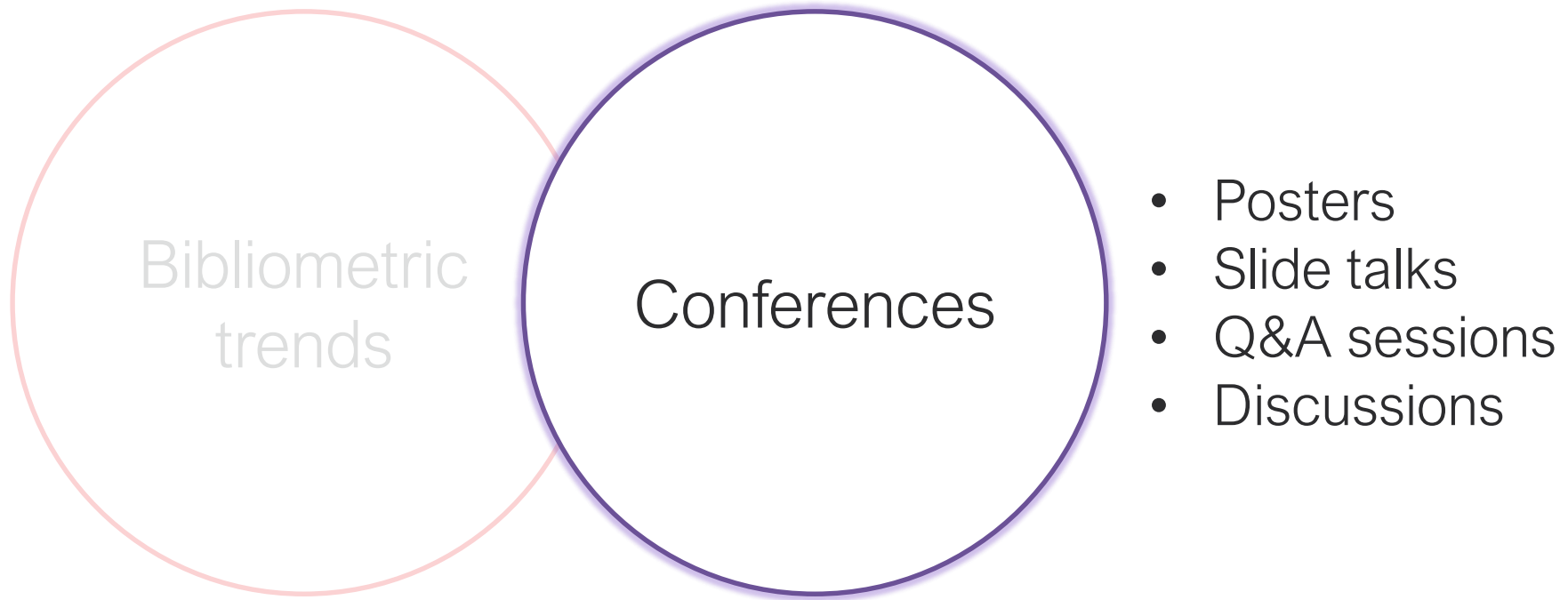


Bibliometric
trends

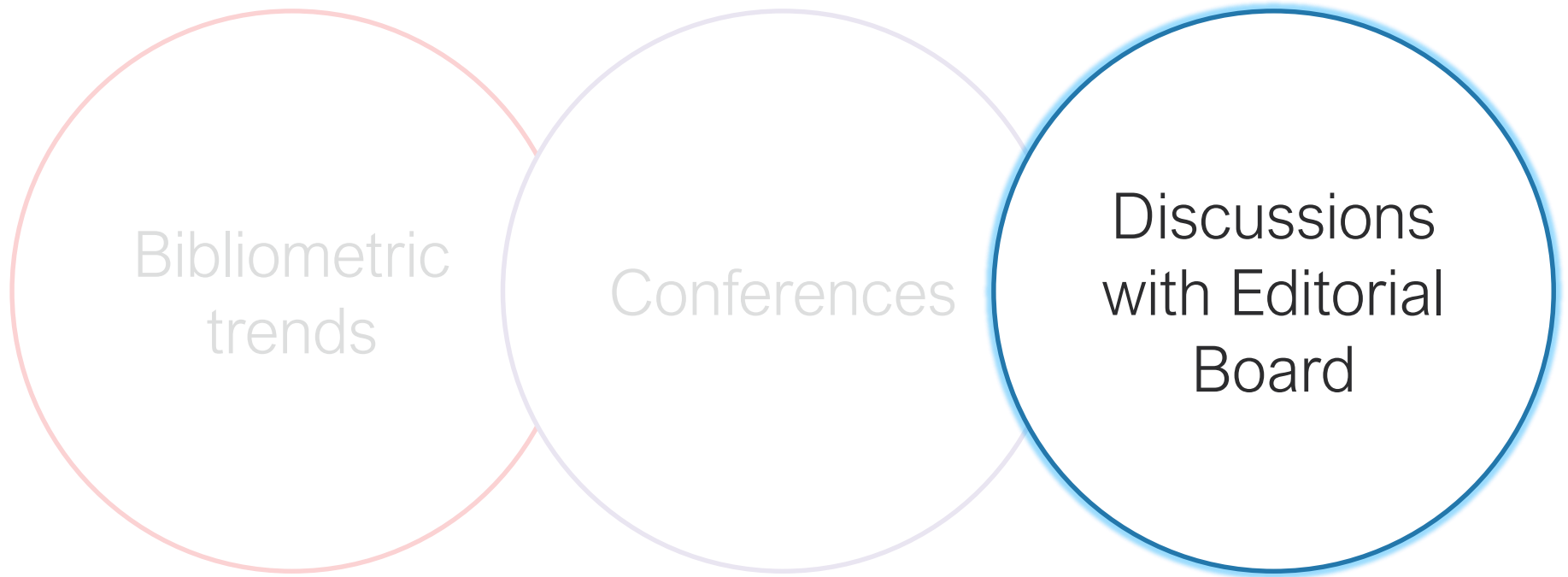
- Publication trends
- Submission trends
- Download trends
- Citation trends

Identify **topics** & **regions** of interest

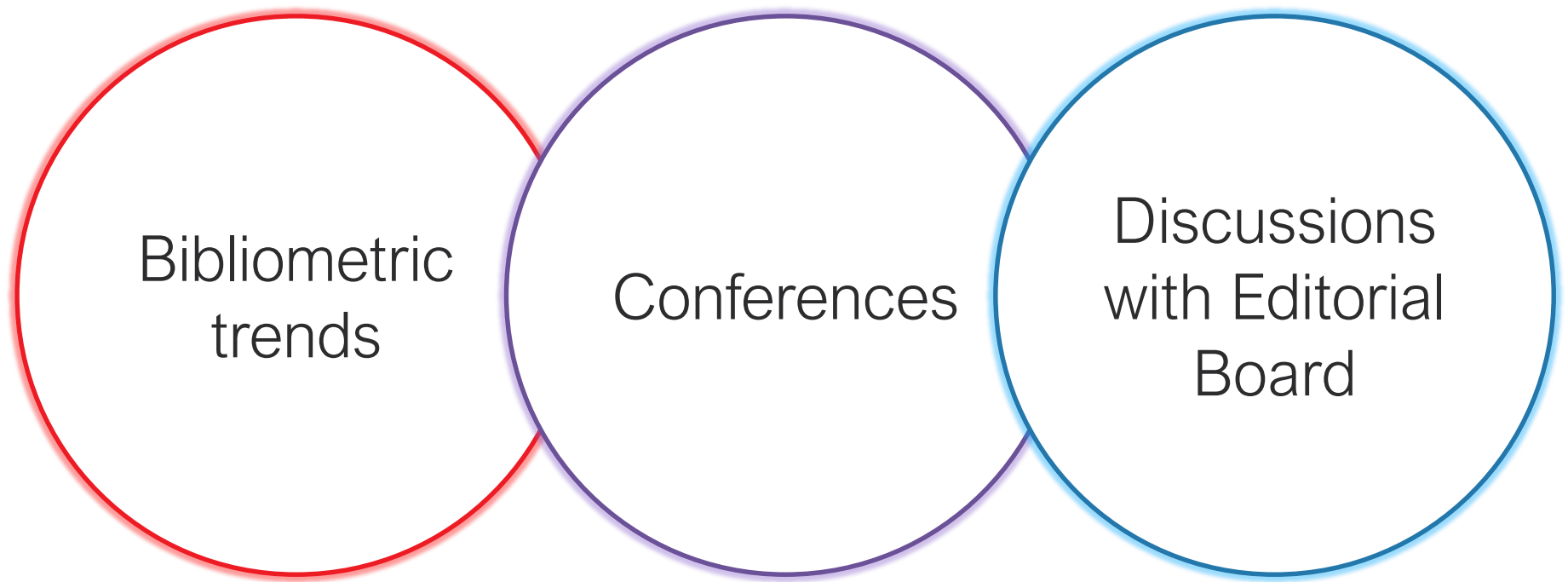
Evaluating trends



Evaluating trends



Evaluating trends



Common criteria for acceptance

- Within journal's scope
- Novel / original
- Relevant for the field
- Trending topic(s)
- Robust study design
- Conclusion supported by evidence



Avoid theoretical biases

Always consider other **perspectives** that are accepted by a portion of the community and should be represented/heard



Nice editorial about mitigating bias

nature biomedical engineering

Editorial

<https://doi.org/10.1038/s41551-023-01104-3>

How to curb bias in manuscript assessments

<https://www.nature.com/articles/s41551-023-01104-3>

Importance of fair manuscript assessment



Authors, reviewers, & editors can have **different perceptions** about what is a fair assessment

Editors should determine **suitability** for peer review based on technical & editorial evaluations



Consistent application of **predetermined** criteria to all manuscripts, regardless of name or institution

Common sources of bias

Limited **specialization** can lead to over-reliance on intuition, name recognition, or amount of data



High **workloads** may prompt editors to prematurely reject manuscripts on subjective preferences

Unconscious **preconceptions** about topics, techniques, or institutions can influence decisions





Strategies to
curb bias

Awareness



Be **aware** of potential biases

Openness



Be **open** to alterantive perspectives and feedback

A magnifying glass with a brass handle and frame is positioned over several old, yellowed documents. The documents feature handwritten text in various cursive scripts, including Spanish and English. One document has a circular stamp with a sunburst design and the letters 'S' and 'M'. Another document has a rectangular stamp with the text 'JANUARY 1870' and 'A. Ga. Mencia Pink'. The magnifying glass is focused on a specific area of the documents, highlighting the intricate details of the handwriting and the texture of the paper.

Transparency

Be **transparent** with the decision-making process

Improving the quality of scientific journals

Be strategic, be fair, and be passionate



Any questions?

Thank you and good luck!



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